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CDC Alert on Ricin

The Centers for Disease Control and Prevention (CDC) is working collaboratively with the Southern Nevada Health District's Environmental Health Division, the FBI, and other public health and law enforcement agencies to investigate a case of possible ricin exposure in Las Vegas. Preliminary results of environmental testing at laboratories in Nevada have tested positive for ricin. Ricin is a potent biologic toxin that is derived from castor beans.

Clinical Description for Ricin Exposure by Ingestion

Ingestion of ricin typically leads to profuse vomiting and diarrhea, which might be bloody, followed by hypovolemic shock and multisystem organ dysfunction. Weakness and influenza-like symptoms, fever, myalgia, and arthralgia might also be reported.

Clinical Description for Ricin Exposure by Inhalation

Inhalation of ricin typically leads to cough and respiratory distress followed by pulmonary edema, respiratory failure, and multisystem organ dysfunction. Weakness and influenza-like symptoms of fever, myalgia, and arthralgia might also be reported.

Case Classification

- *Suspected.* A case in which a potentially exposed person is being evaluated by health-care workers or public health officials for poisoning by a particular chemical agent, but no specific credible threat exists.
- *Probable.* A clinically compatible case in which a high index of suspicion (credible threat or patient history regarding location and time) exists for ricin exposure, or an epidemiologic link exists between this case and a laboratory-confirmed case.
- *Confirmed.* A clinically compatible case in which laboratory tests have confirmed exposure. The case can be confirmed if laboratory testing was not performed because either a predominant amount of clinical and nonspecific laboratory evidence of a particular chemical was present or a 100% certainty of the etiology of the agent is known.

Laboratory Testing for Ricin

Two types of laboratory testing are available for suspected ricin exposures:

- *Environmental.* Detection of ricin in environmental samples, as determined by CDC (for suspected exposures from the environment) or FDA (for suspected exposures from food or medication). Ricin can be detected qualitatively by time-resolved fluoroimmunoassay (TRFIA) and polymerase chain reaction (PCR) in environmental specimens (e.g., filters, swabs, or wipes).

- *Biologic.* CDC can assess selected specimens on a provisional basis for urinary ricinine, an alkaloid in the castor bean plant. Urinary ricinine testing is the only clinical test for ricin exposure available at CDC.

More information about clinical descriptions, case classifications, and laboratory testing can be found at MMWR January 14, 2005 / 54(RR01); 1-24. <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5401a1.htm>

CDC requests that public health officials and clinicians who encounter patients with symptoms consistent with ricin poisoning report these cases to the CDC Emergency Operations Center, telephone 770-488-7100. The local poison control center (PCC) should also be contacted at 1-800-222-1222 to report cases. Medical personnel are available at PCCs to provide specific advice on treatment and management of ricin poisoning if needed.

For additional information about ricin including signs, symptoms, and treatment, please visit CDC's website at <http://www.bt.cdc.gov/agent/ricin/index.asp>, call 1-800-CDCINFO (TTY 888-232-6348), or email cdcinfo@cdc.gov.

For additional clinical information see <http://emergency.cdc.gov/agent/ricin/hp.asp>.

The Centers for Disease Control and Prevention (CDC) protects people's health and safety by preventing and controlling diseases and injuries; enhances health decisions by providing credible information on critical health issues; and promotes healthy living through strong partnerships with local, national and international organizations.

DEPARTMENT OF HEALTH AND HUMAN SERVICES